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March 10, 2006

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CONCURRENCE ON FINAL CONCEPTUAL DESIGN (CD) & REMEDIAL ACTION CONSTRUCTION (RAC) WORKPLANS FOR SITE 10 REMEDIAL ACTION, FORMER SR-71 ENGINE TEST CELL, BEALE AIR FORCE BASE (AFB), YUBA COUNTY

Dear Mr. O'Brien:

The Department of Toxic Substances Control (DTSC) has reviewed and concurs with the subject document (Final CD Workplan), dated July 26, 2004, as well as the "*Final Site 10 Remedial Action Construction Workplan (Final RAC Workplan),*" dated September 23, 2004. DTSC provided comments on the Draft CD and RAC Workplans, dated March 3, 2004 and May 11, 2004, respectively, via e-mail on September 4, 2004. Site 10 is the Former SR-71 Engine Test Cell, and has soil contaminated with Polycyclic Aromatic Hydrocarbons (PAH), Volatile Organic Compounds (VOC), Total Petroleum Hydrocarbons (TPH); and groundwater contaminated with VOC, most notably Trichloroethene (TCE).

The proposed remedy includes Excavation of PAH Soils, Bioventing, Enhanced In-Situ Bioremediation (EISB) for the source area, Monitored Natural Attenuation (MNA) for the distal plume, and Land Use Controls (LUCs). The Final CD Workplan contains a summary of the proposed remedy and basis of design, hydrogeologic monitoring results, groundwater modeling, cost estimate, design specifications, and construction quality assurance plan. The Final RAC Workplan contains more detailed descriptions of the design components, drawings, construction methods, and an Operations and Maintenance Plan.

DTSC concurs with the Final CD and RAC Workplans; noting however, that the remedy is being implemented in anticipation of an approved Record of Decision. The remainder of this letter

briefly provides background and summarizes the proposed remedy and basis of design components.

BACKGROUND

Site 10 is located in the north-central portion of Beale AFB and was used for testing SR-71 jet engines. Contaminants include jet fuel, petroleum distillates, soap, oil, and solvents. TCE is the most wide-spread contaminant in groundwater – approximately 40 acres of the uppermost aquifer have TCE concentrations greater than the Maximum Contaminant Level of five microgram/liter (µg/l). The maximum concentration of TCE is approximately 1,300 µg/l, and approximately nine acres have TCE concentrations above 100 µg/l, defined as the source zone. PAH-contaminated soil is believed to be less than 15 cubic yards (CY), while TPH-diesel is believed to be about 100 CY. VOC contaminated soil has been remediated by Soil Vapor Extraction (SVE).

REMEDY DESIGN

The remedy design is summarized as follows:

1. PAH-Contaminated Soils – Excavation and Disposal in an Offbase Disposal Facility

2. TPH-Contaminated Soils – Bioventing

The existing SVE system will be converted to a Bioventing System. Six additional monitoring and/or vapor wells will be installed in conjunction with the conversion of the SVE System to a Biovent System.

3. TCE-Contaminated Groundwater < 100 µg/l – Monitored Natural Attenuation

Eight additional monitoring wells will be established in the distal portion of the plume to evaluate if MNA is sufficiently occurring.

4. TCE-Contaminated Groundwater >= 100 µg/l – Enhanced In-Situ Bioremediation

Groundwater in the approximate nine acres of the source zone will be extracted, mixed with an electron donor, e.g. sodium lactate, anaerobic conditions established, KB-1 microorganisms injected, and the water re-injected to effect biological reductive dechlorination. The system will be built out in three stages to allow evaluation and optimization. The initial pilot study will consist of five extraction and eight injection wells. The number and size of each type of well may change based on evaluation of the pilot stage. Beale AFB expects to install a total of 60

wells on three transects (15 extraction, 30 injection, and 15 monitoring). Land Use Controls will be placed in the Base Master Plan to restrict groundwater use and access to prevent human or ecological exposure to contaminants or adversely affect implementation of the remedy.

CONCLUSION

DTSC concurs with the Site 10 Final CD Workplan. Beale AFB has adequately addressed comments on the Draft CD Workplan through responses to comments, working meetings, the Final CD Workplan, and Waste Discharge Requirements administered by the Central Valley Regional Water Quality Control Board in June and August of 2004. DTSC notes this design is being implemented in anticipation of an approved Record of Decision.

If you have any questions or concerns regarding this letter, please contact Mr. Terry Escarda, of my staff, at (916) 255-3714 or via e-mail at tescarda@dtsc.ca.gov.

Sincerely,

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